

HU:MGSDVRDLNALLPAVPSLGGGGGCGALPVSGAAQWAPVLDFAFPGASAYGSL  
MO:MGSDVRDLNALLPAVSSLGGGGGCGLPVSGAAQWAPVLDFAFPGASAYGSL

HU:GGPAPPPAPPPPPPPPPHSHFIXQEP SWGGAEPHEEQCLSAFTVHFSGQFTGTAG  
MO:GGPAPPPAPPPPPPPPPHSHFIXQEP SWGGAEPHEEQCLSAFTLHFSGQFTGTAG

HU:ACRYGPF GPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQGYSTVTFDGTGS  
MO:ACRYGPF GPPPPSQASSGQARMFPNAPYLPSCLESQPTIRNQGYSTVTFDGAPS

HU:YGHTPSHHAAQFPNHSHFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCGTG  
MO:YGHTPSHHAAQFPNHSHFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCGTG

HU:SQALLLRTPYSSDNLYQMTSQLECMTNQMNLGATLKGVAAGSSSSSVKWTE  
MO:SQALLLRTPYSSDNLYQMTSQLECMTNQMNLGATLKGMAAGSSSSSVKWTE

HU:GQSNHSTGYESDNHTTPIICGAQYRIHTHGVRGIQDVRRVPGVAPTLVRSAS  
MO:GQSNHGIGYESDNHTAPIICGAQYRIHTHGVRGIQDVRRVSGVAPTLVRSAS

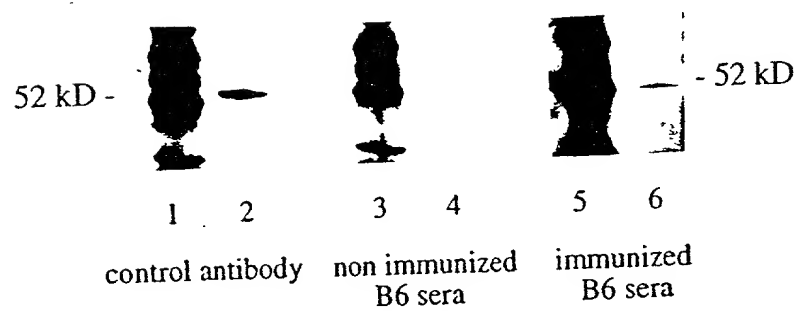
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MO:ETSEKRPFMCAYPGCNKRYFKLSHLQMH SRKHTGEKPYQCDFKDCERRFSR

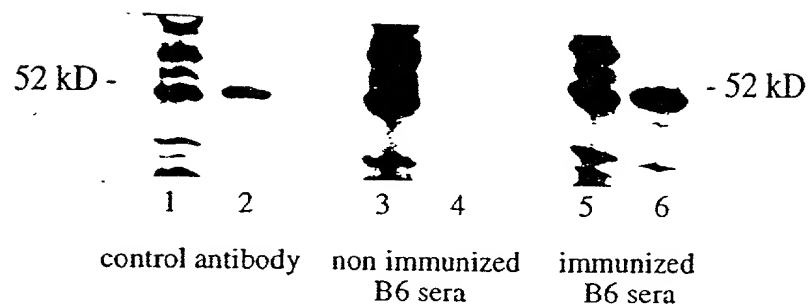
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MO:SDQLKRHQRRHTGVKPFQCKTCQRKF SRSDHLKTHTRTHTGKTSEKPFSCR

HU:WPSCQKKFARSDELVRHENMEQRNMTKLQAL  
MO:WESCQKKFARSDELVRHENMEQRNMTKLHVAL

FIG. 1

**FIG. 2**

**FIG. 3**

**FIG. 4**

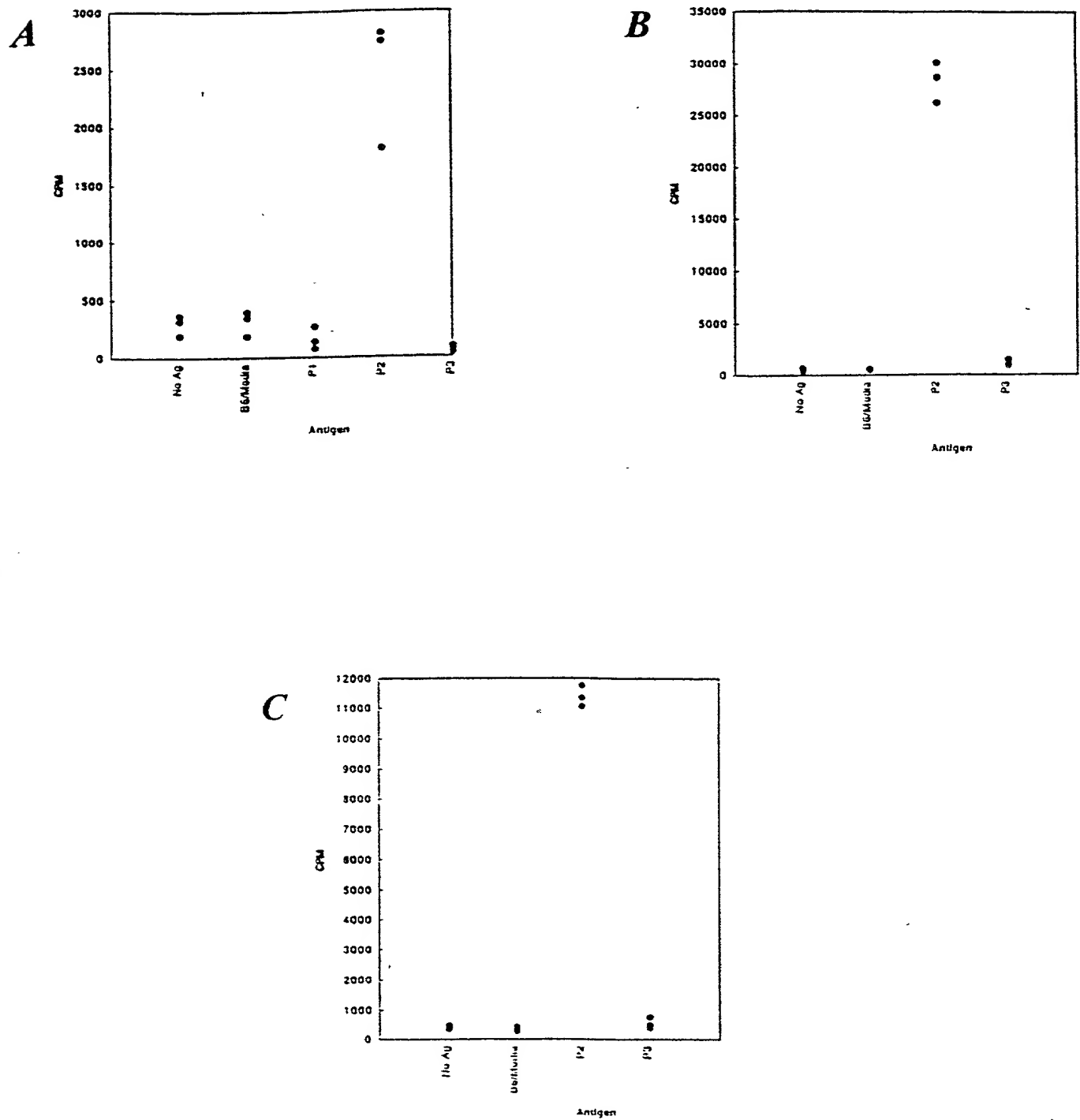
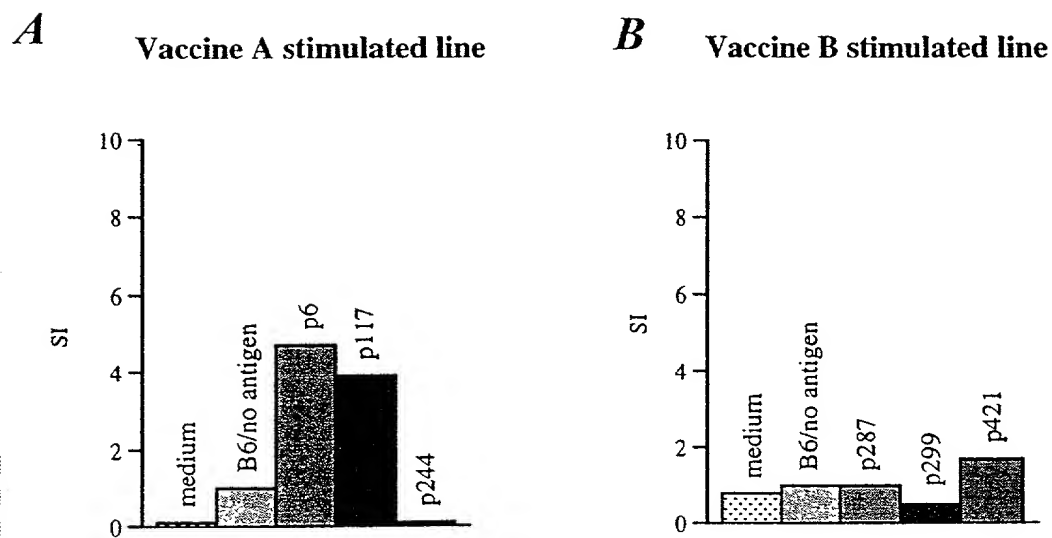
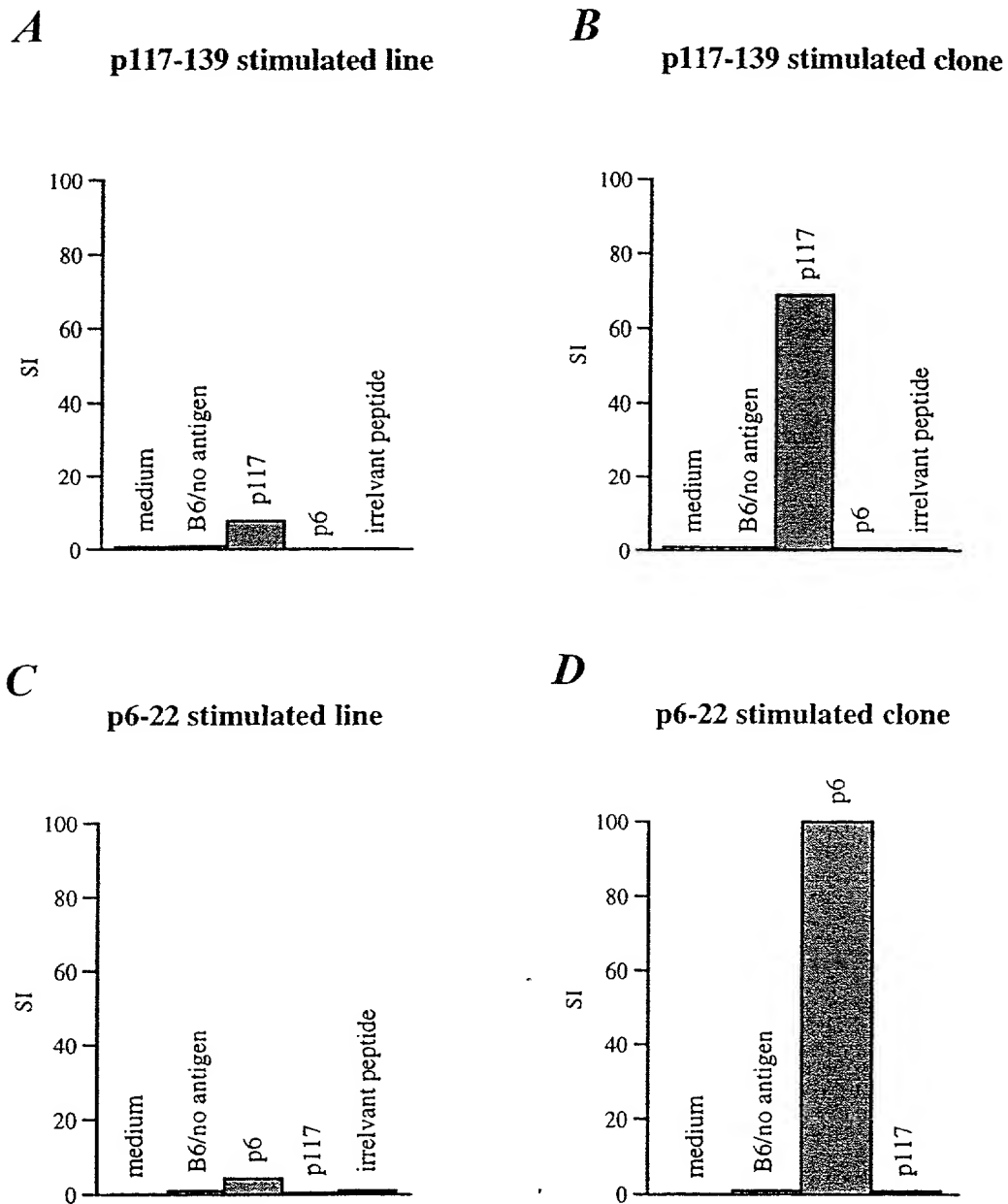


FIG. 5A-5C

**FIG. 6A and 6B**

**FIG. 7A-7D**

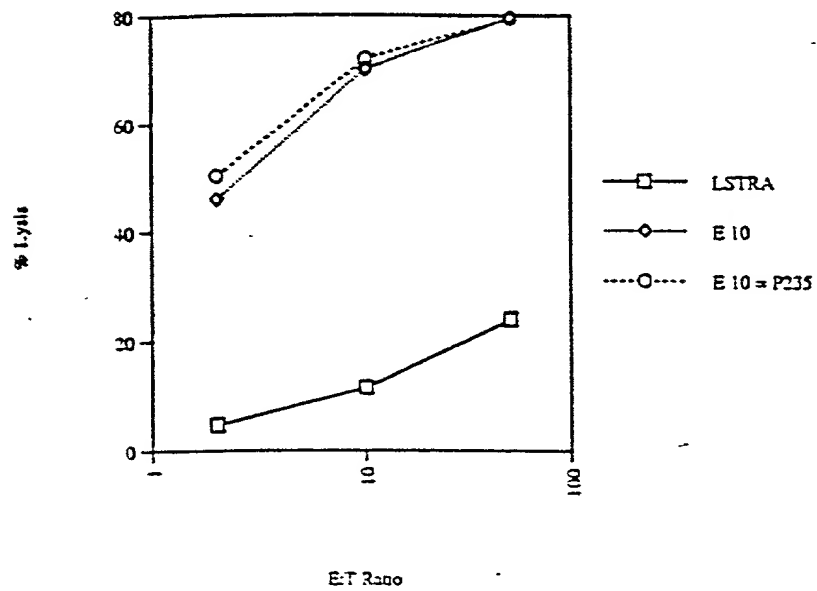
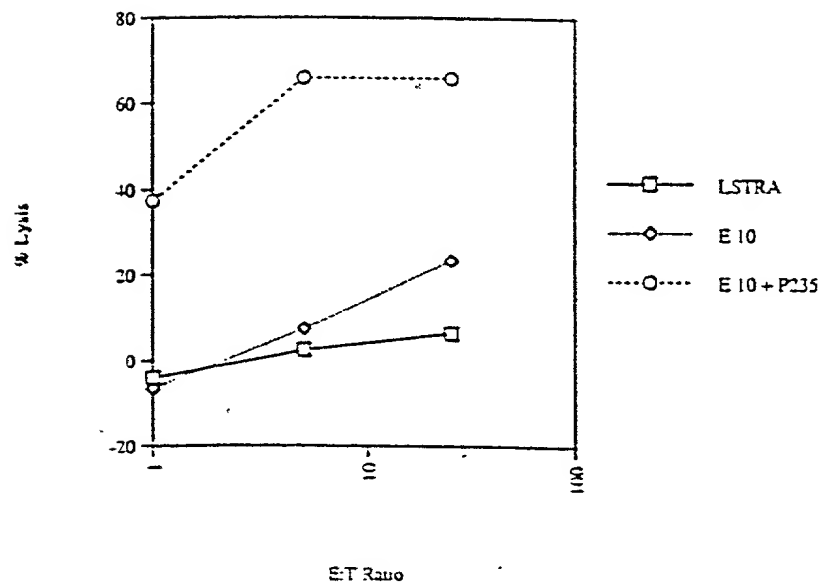
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MGSDVRDLNALLPAVPSLGGGGGCGALPVSGAAQWAPVLDFAFPGASAYGSLGGPAPPPAPPPPPPPPHSFIKQE  
.....AAAAAAAAAAAAAAAA.....AAAAA.....AAAAAAAAAAAA.....  
.....RRRR.....  
.....  
.....  
80 85 90 95 100 105 110 115 120 125 130 135 140 145 150  
PSWGGAEPHEEQCLSAFTVHFSGQFTGTAGACRYGPFPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQYGS  
.....AAA.....AAAA.....AAA.....AAAAA.....  
.....RRRR.....RRRR.....  
.....DDDDDDDD.....  
.....  
155 160 165 170 175 180 185 190 195 200 205 210 215 220 225  
TVTFDGTSPSYGHTPSHHAAQFPNHSFKHEDPMGQCGLGEQQYSVPPVYGCHTPTDSCGTSQALLLRTPYSSDN  
.....AAAAA.....AAAAA.....AA  
.....RRRR.....  
.....DDDDDDDDDDDD.....  
.....  
230 235 240 245 250 255 260 265 270 275 280 285 290 295 300  
LYQMTSQLECMTNQMNLGATLKGVAAGSSSVKWTGEGQSNHSTGYESDNHTTPILCGAQYRIHTHGVERGIQDV  
AAAAAAAA.....AAA.AAA.....AAAAAAAAA  
.....RRRRRRRRRR.....RRRR.....RRRR.....  
DDDDDD.....DDDDDDDDDD.....  
.....ddddd.....  
305 310 315 320 325 330 335 340 345 350 355 360 365 370 375  
RRVPGVAPTLVRSASETSEKRPFCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFRSDQLKRHR  
AAAAA.AAAAAAAAAA.....AAAA.AAAAAAAAAA.  
.....RRRR.....RRRR.....  
.....DDDDDD.....  
.....  
380 385 390 395 400 405 410 415 420 425 430 435 440 445 450  
RHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCRWPSCQKKFARSDLVRRHNMHQRNMTKLQLAL  
.....AAAA.AAAA.AA.....AAAA.....AAA.....AAAAA.....AAA.....  
.....RRRR.RRRR.....  
.....  
.....dddddddddd.....

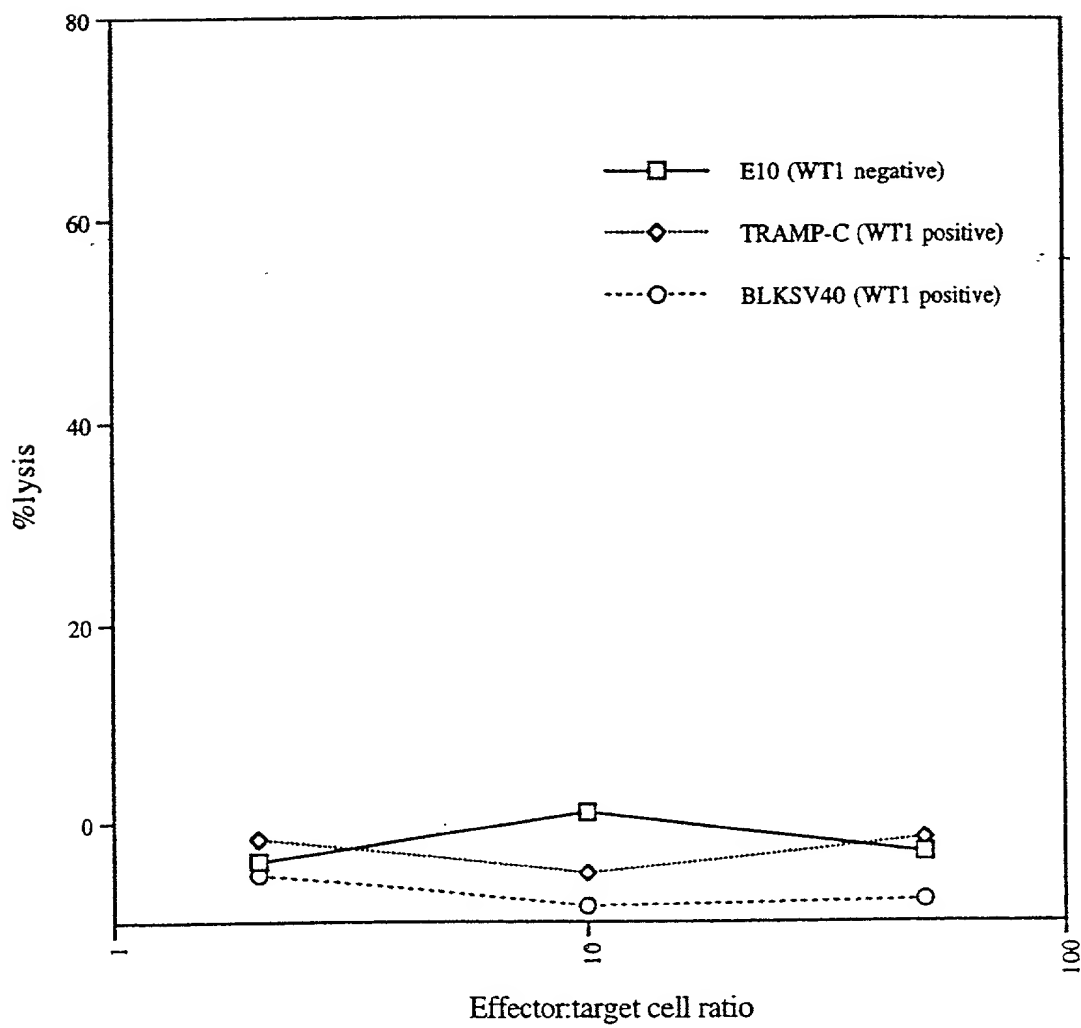
FIG. 8A



5 10 15 20 25 30 35 40 45 50 55 60 65 70 75  
 MGS D V R D L N A L L P A V S S L G G G G C G L P V S G A A Q W A P V L D F A P P G A S A Y G S L G G P A P P P A P P P P P P P P H S F I K Q E  
 . . . . . A A A A A A A A A A A A A A . . . . . A A A A A A . . . . . A A A A A A A A A A A A . . . . .  
 . . . . . R R R R . . . . .  
 . . . . .  
 . . . . .  
 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150  
 P S W G G A E P H E E Q C L S A F T L H F S G Q F T G T A G A C R Y G P F G P P P S Q A S S G Q A R M F P N A P Y L P S C L E S Q P T I R N Q G Y S  
 . . . . . A A A A . . . . . A A A . . . . . A A A A A A . . . . .  
 . . . . . R R R R . . . . . R R R R R . . . . .  
 . . . . . D D D D D D D D D . . . . .  
 . . . . .  
 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225  
 T V T F D G A P S Y G H T P S H H A A Q F P N H S F K H E D P M G C Q G S L G E Q Q Y S V P P P V Y G C H T P T D S C T G S Q A L L R T P Y S S D N  
 . . . . . A A A A A . . . . . A A A A A . . . . . A A  
 . . . . . R R R R . . . . .  
 . . . . . D D D D D D D D D D D D D . . . . .  
 . . . . .  
 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300  
 L Y Q M T S Q L E C M T W N Q M N L G A T L K G M A A G S S S V K W T E G S N H G I G Y E S D N H T A P I L C G A Q Y R I H T H G V F R G I Q D V  
 A A A A A A A . . . . . A A A . A A A . . . . . A A A A A A A A A A A A  
 . . . . . R R R R R R R R R R . . . . . R R R R . . . . . R R R R . . . . .  
 D D D D D . . . . . D D D D D D D D D D D . . . . . d d d d d . . . . .  
 . . . . .  
 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375  
 R R V S G V A P T L V R S A S E T S E K R P F M C A Y P G C N K R Y F K L S H L Q M H S R K H T G E K P Y Q C D F K D C E R R F S R S D Q L K R H Q R  
 A A A A A . A A A A A A A A A A . . . . . A A A A . A A A A A A A A A A .  
 . . . . . R R R R R . . . . . R R R R . . . . .  
 . . . . . D D D D D D D D D D . . . . .  
 . . . . .  
 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450  
 R H T G V K P F Q C K T C Q R K F S R S D H L K T H T R T H T G K T S E K F F S C R W H S C Q K K F A R S D E L V R H H N M H Q R N M T K L H V A L  
 . . . . . A A A A . A A A A . A A . . . . . A A A A . . . . . A A . . . . . A A A A A A A . . . . . A A A A . . . . .  
 . . . . . R R R R . . . . . R R R R . . . . .  
 . . . . . d d d d d d d d d d d . . . . .  
 . . . . .

FIG. 8B

**A****B****FIG. 9A and 9B**

**FIG. 10A**

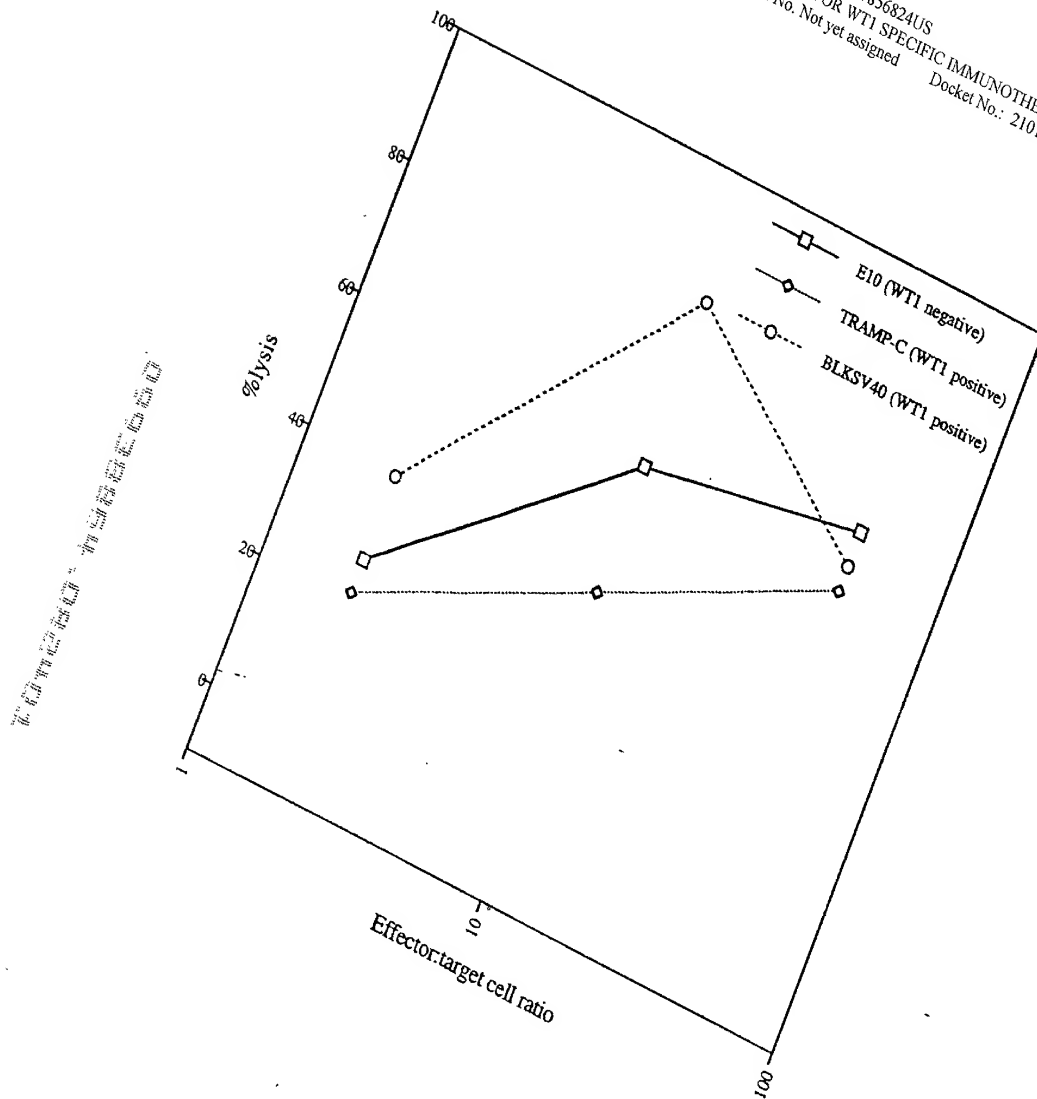
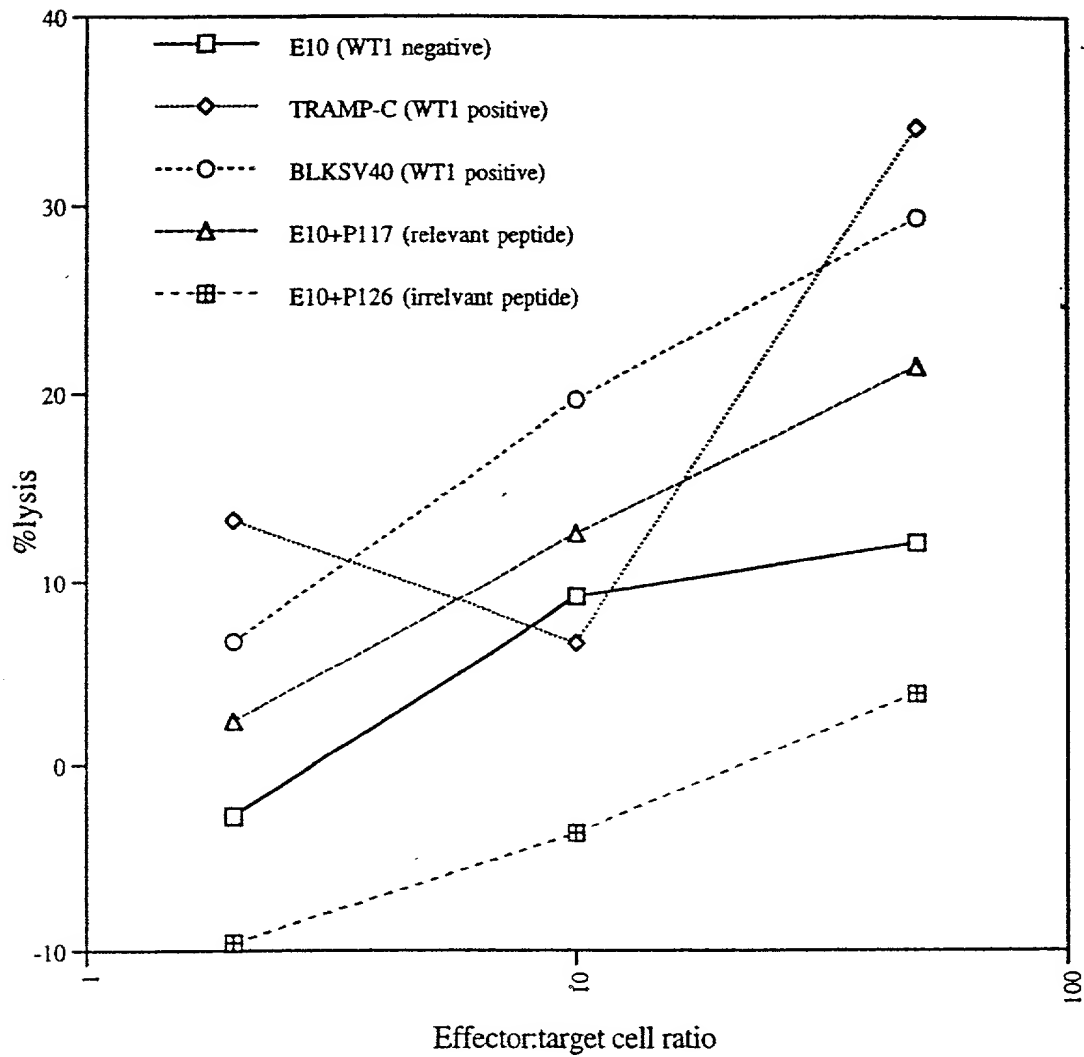
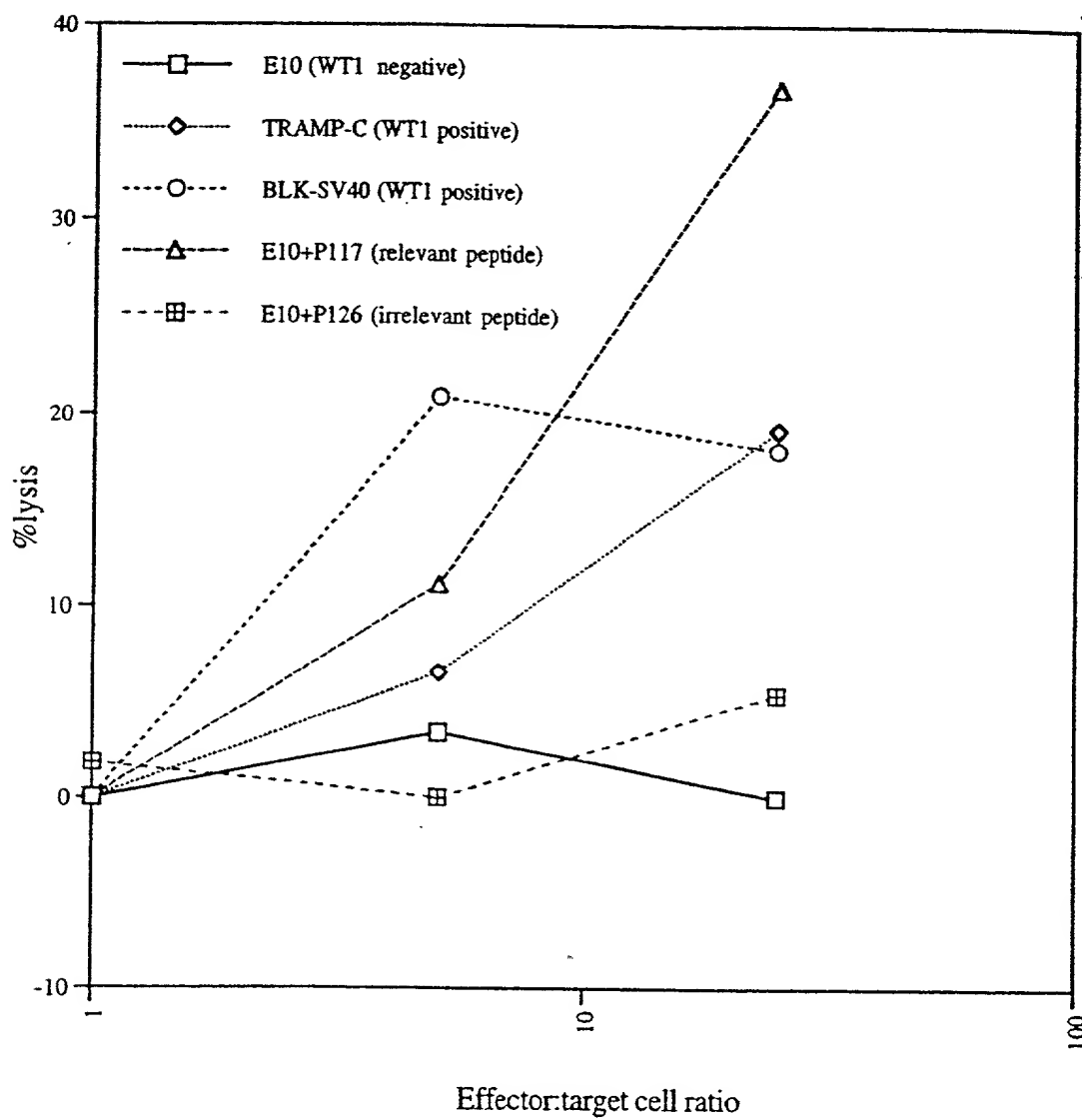
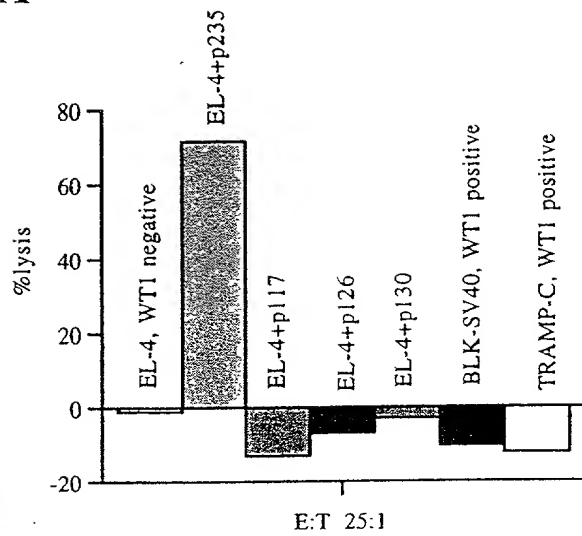
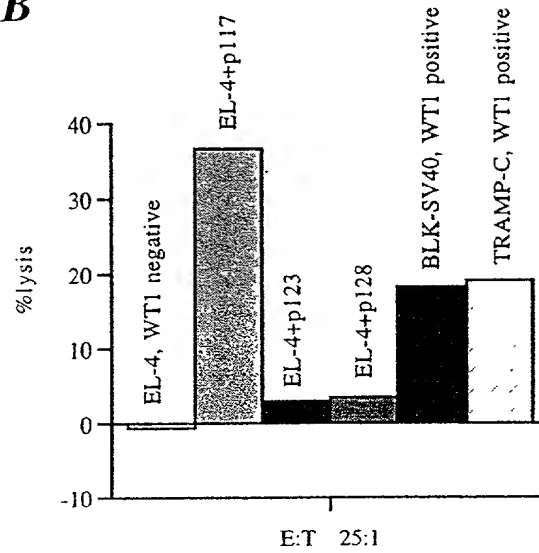
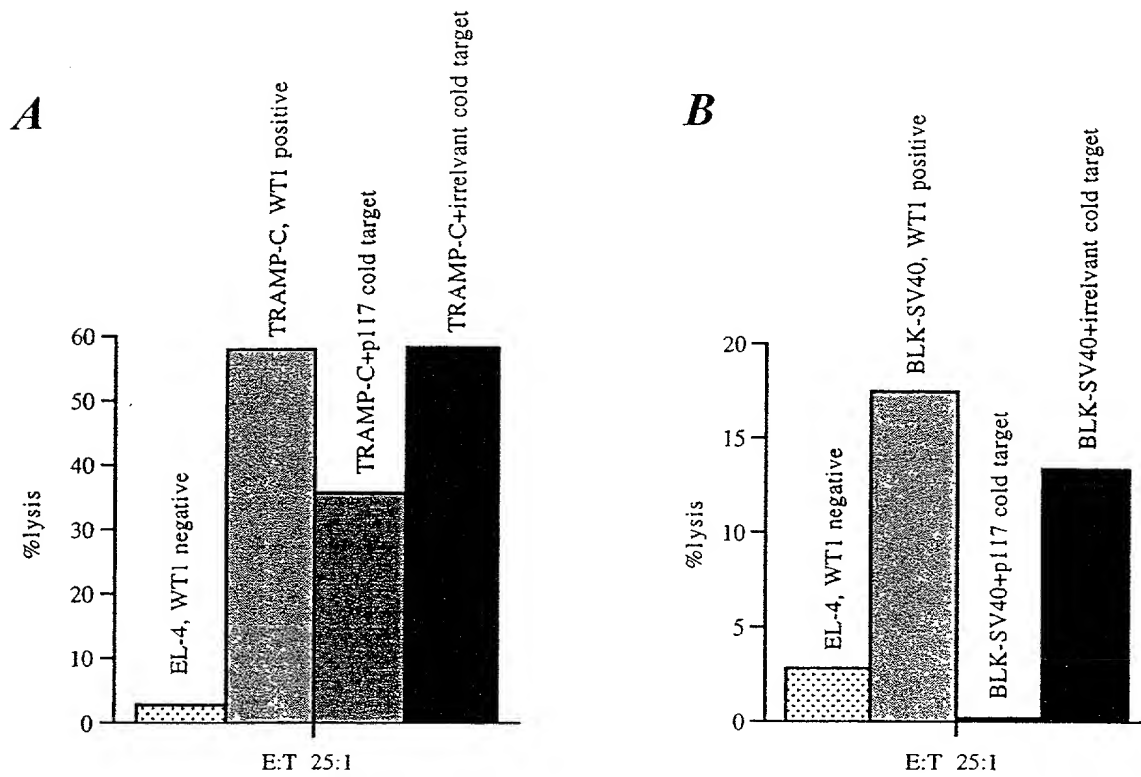


FIG. 10B

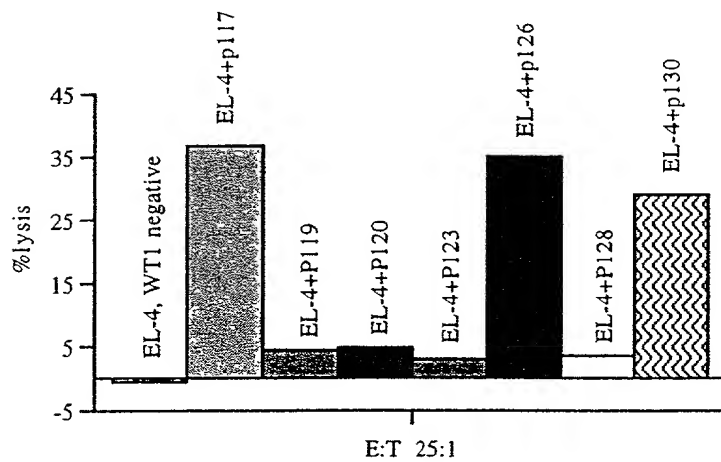
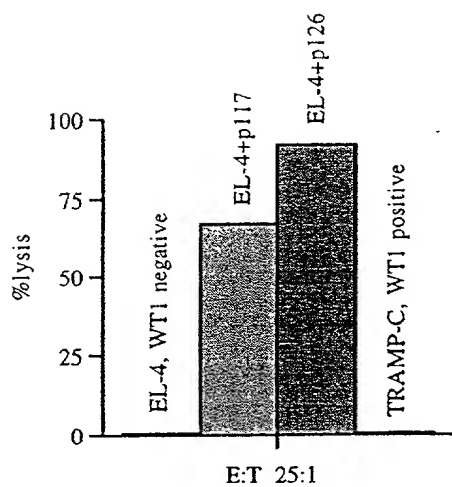
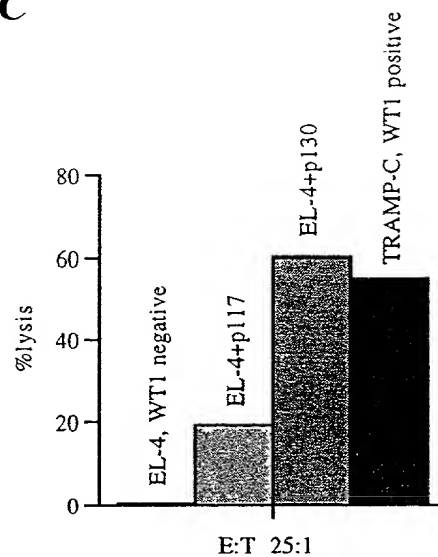
**FIG. 10C**

**FIG. 10D**

**A****B****FIG. 11A and 11B**

**FIG. 12A and 12B**



**A****B****C****FIG. 13A-13C**

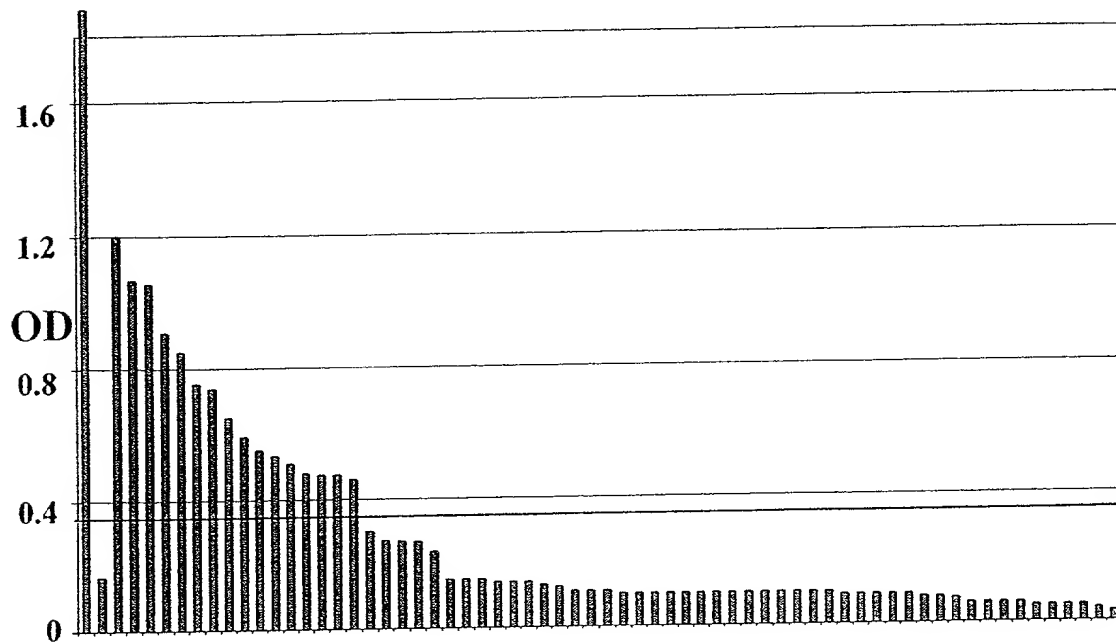


Fig. 14

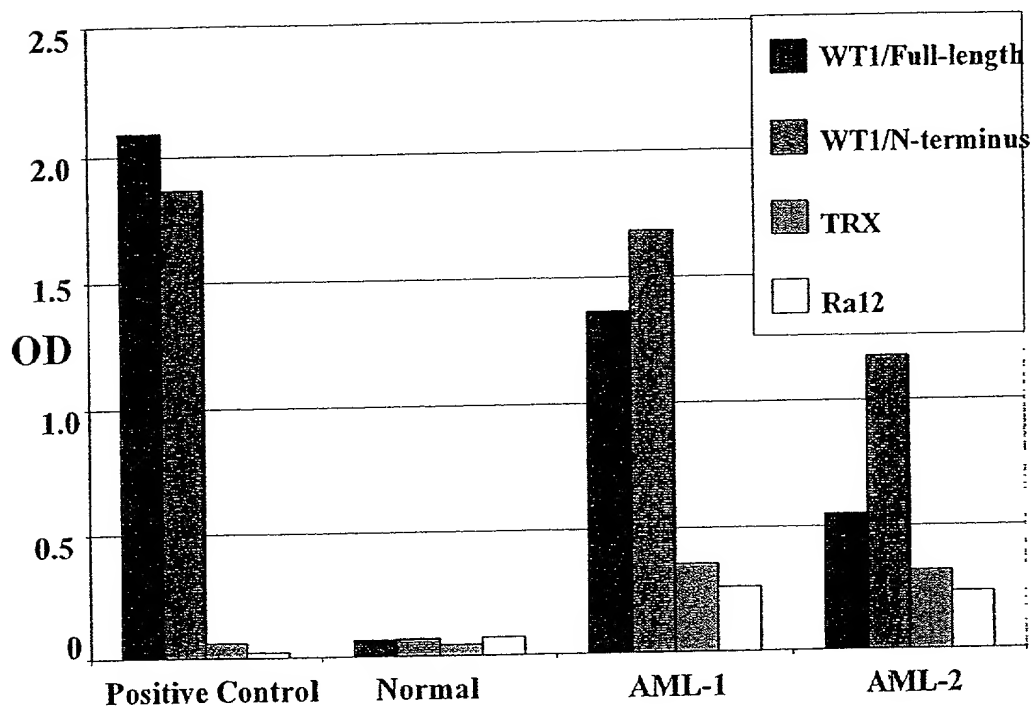


Fig. 15

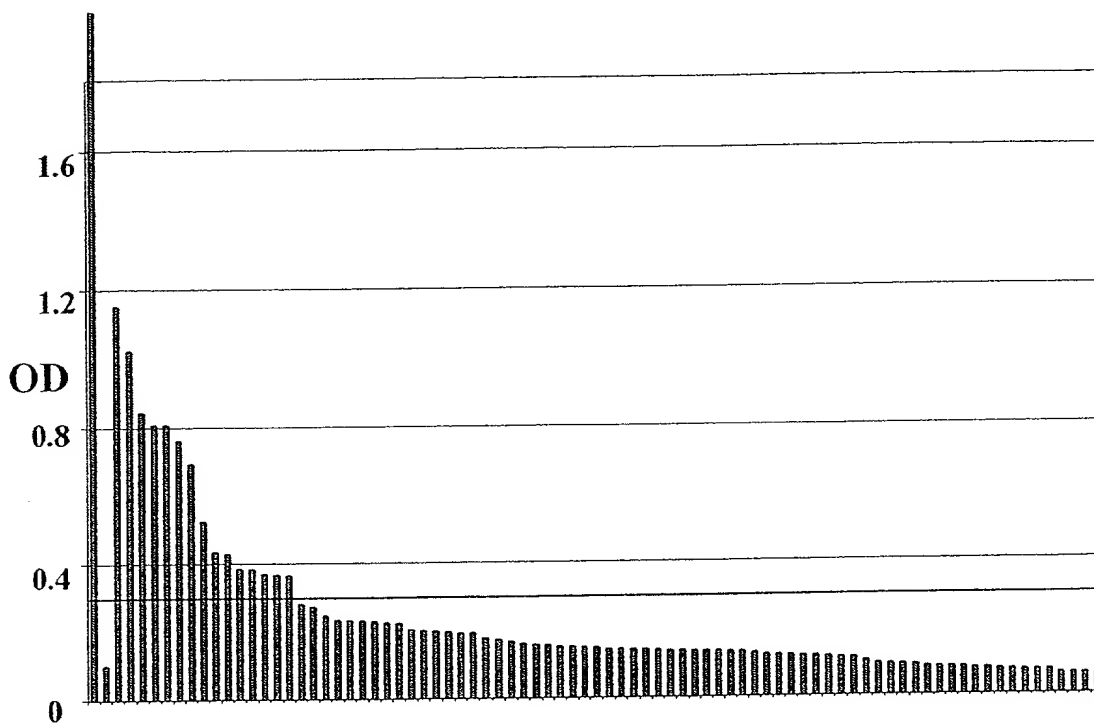


Fig. 16

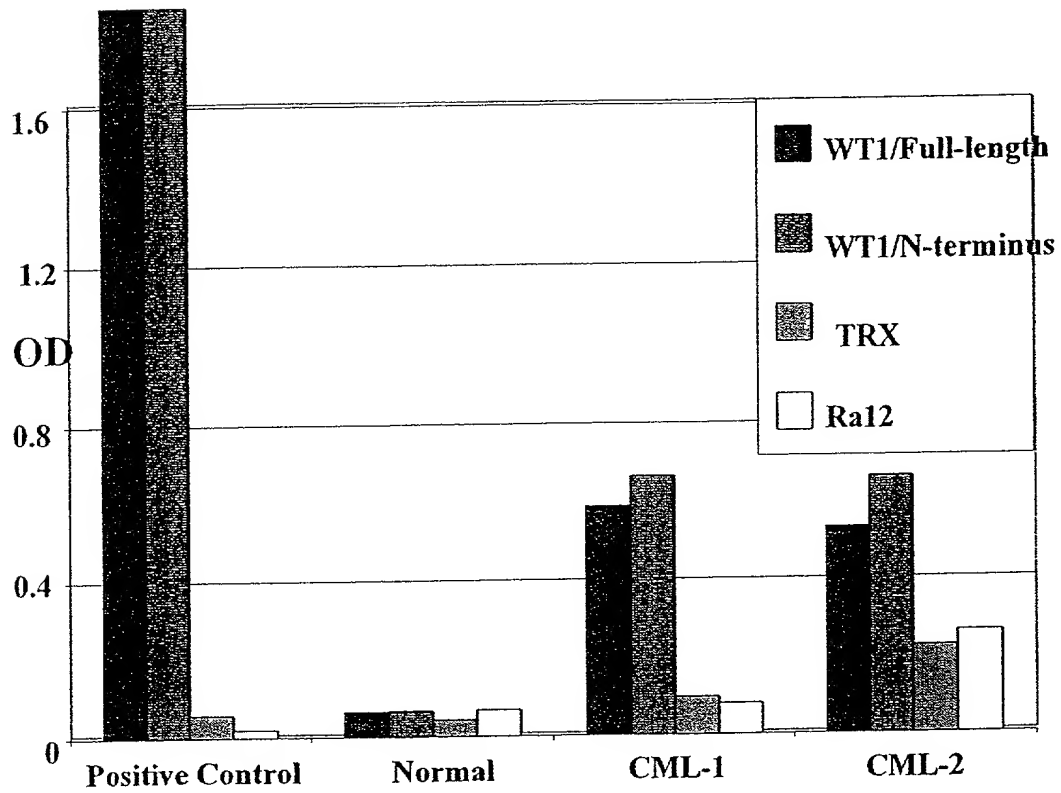


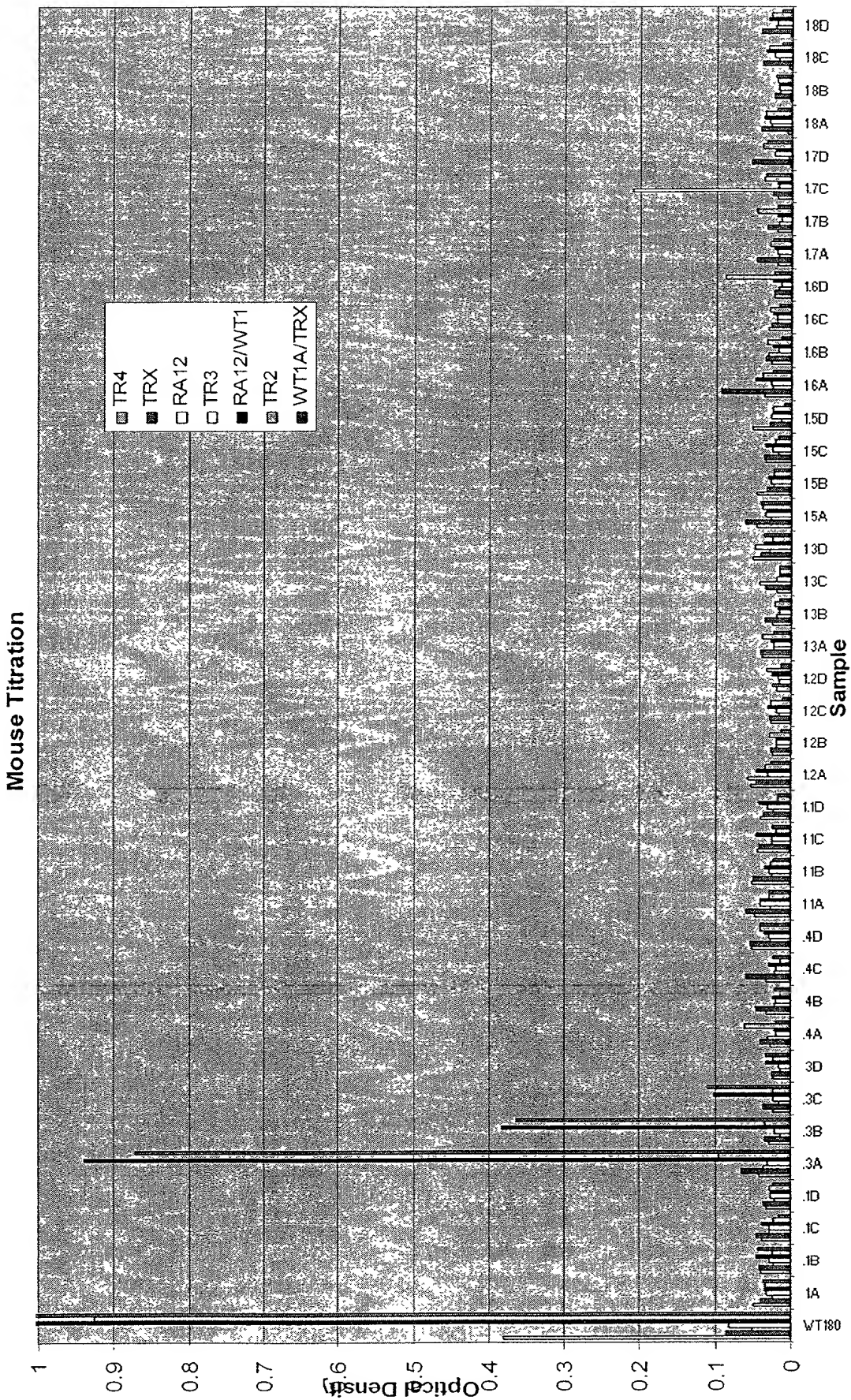
Fig. 17

TABLE 1: Characteristics of Recombinant WT1 Proteins Used for Serological Analysis

<u>Name</u>	<u>Recombinant Protein</u>	<u>WT1 Amino Acid Position</u>	<u>Molecular Weight</u>
WT1/full-length	Ra12-WT1 full length fusion protein	aa 1-449	85kDa
WT1/N-terminus	TRX-WT1 N-terminus fusion protein	aa 1-249	60kDa
WT1/C-terminus	WT1 C-terminus protein	aa 267-449	50kDa

Fig. 18

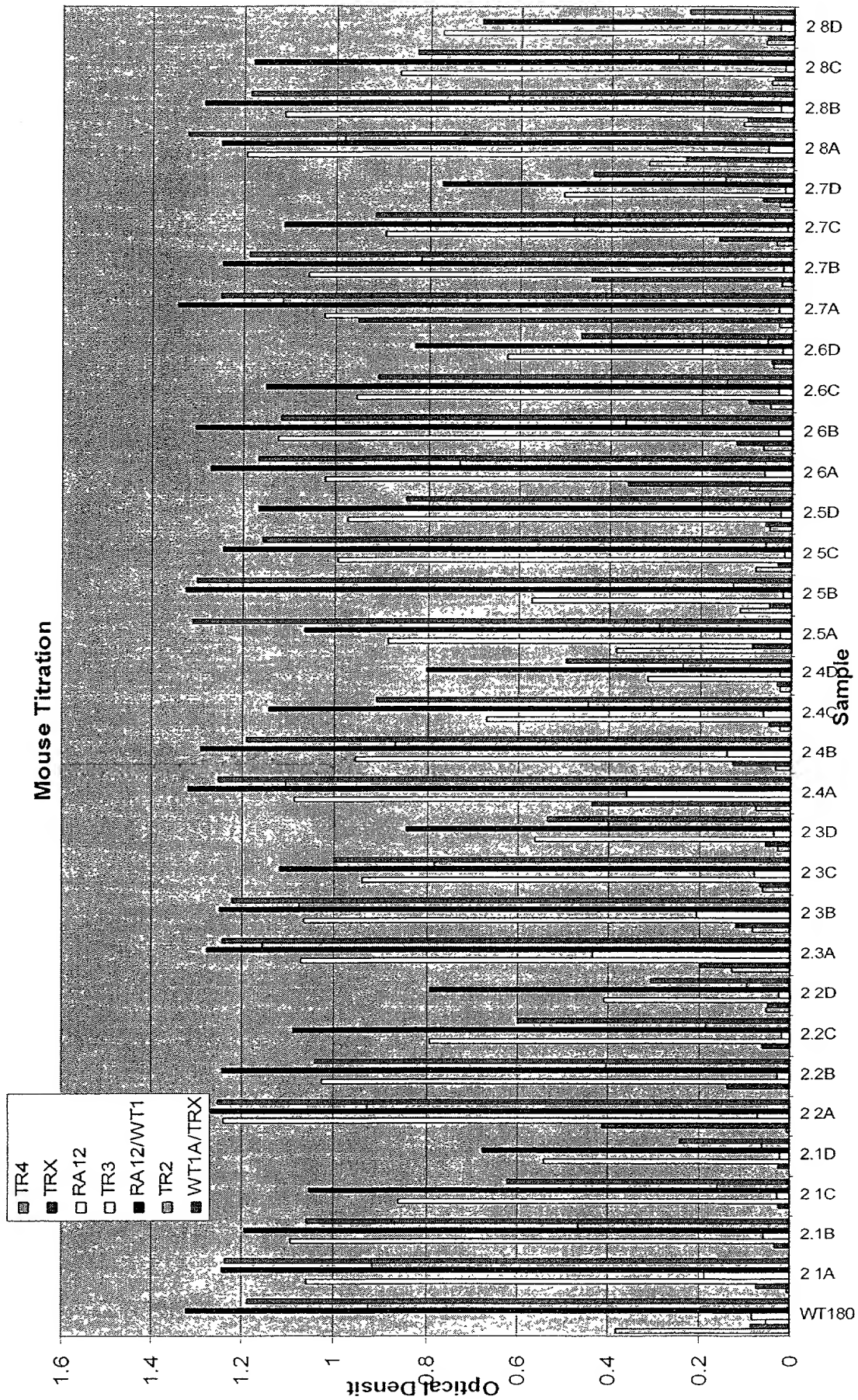
CID000622 Figure 1a Ab responses in group 0 and 1 (controls)



Control groups. A: 1:500 Dilution, B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19 A

CID000622 Figure 1b. Ab responses in group 2 (25ug Ra12/WT1)

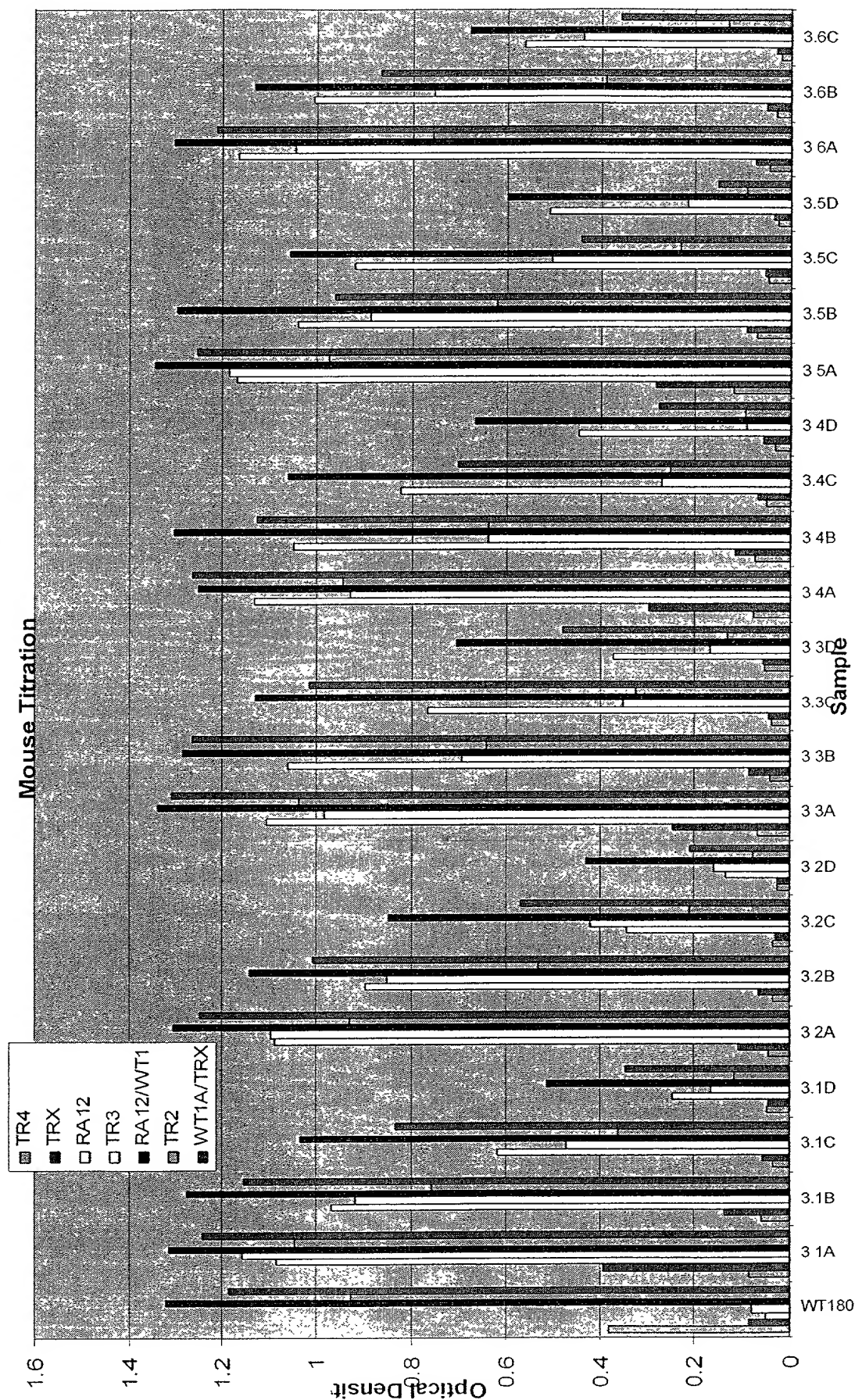


25ug Ra12/WT1+MPL-SE, A: 1:500 Dilution, B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19B



CID000622 Figure 1c. Ab responses in group 3 (100ug Ra12/WT1)

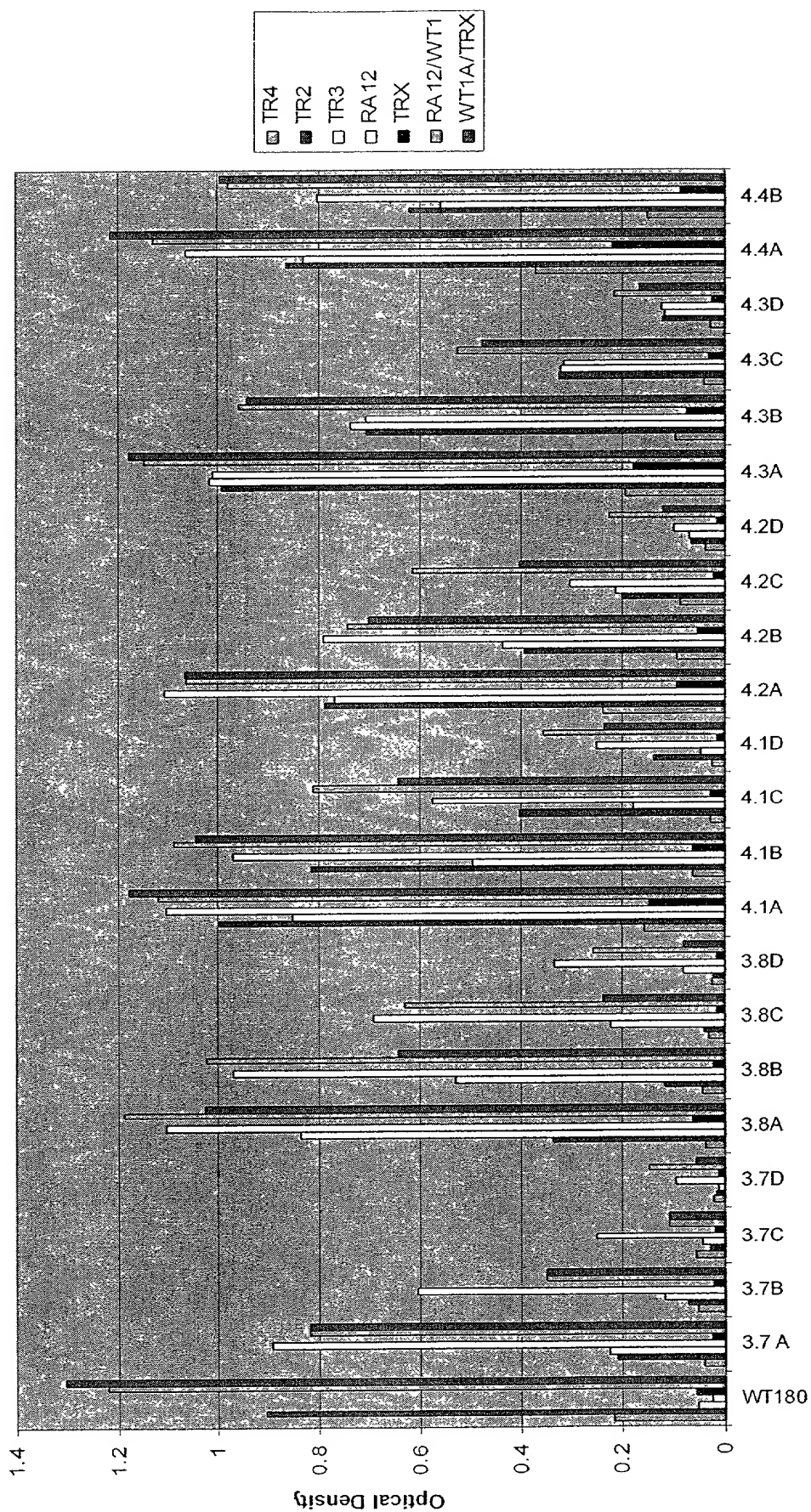


WT1. Dose Titration. Ab responses to WT1. 100ug Ra12-WT1+MPL-SE. A: 1;500 Dilution, B: 1;2000, C: 1; 8000, D: 1;16000

FIG. 19C

CID000622 Figure 1d. Ab responses in groups 3 and 4 (1000ug Ra12/WT1)

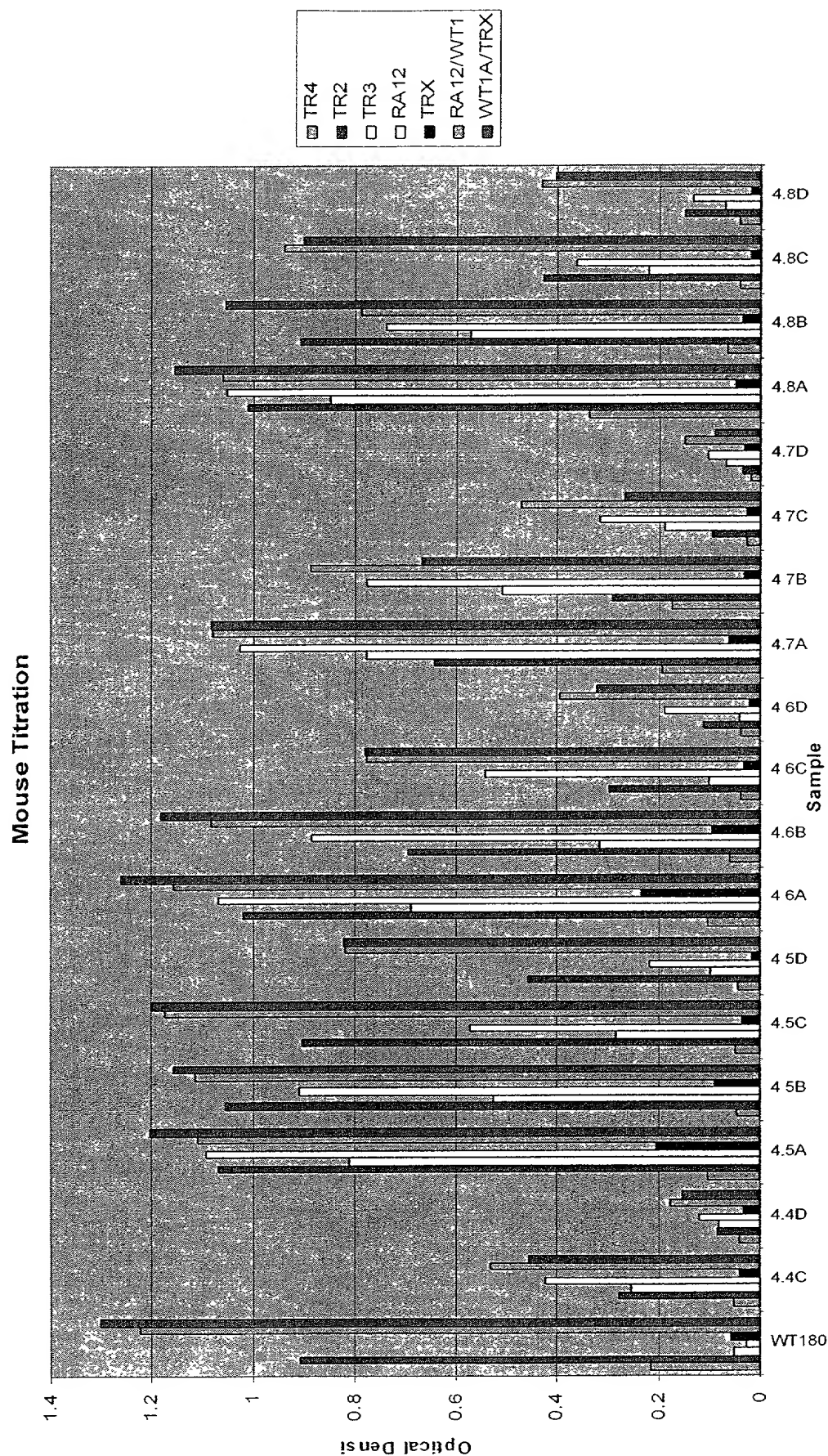
Mouse Titration



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1;500 Dilution, B: 1:2000,  
C: 1: 8000, D: 1:16000

FIG. 19D

Figure 1e. Ab responses in group 4 (1000ug Ra12/WT1)



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution,  
B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19E



Figure 2a. Proliferative T-cell responses in WT1 protein immunized mice.  
(Ra12WT1 dose titration, 3x in vivo, after 2IVS)

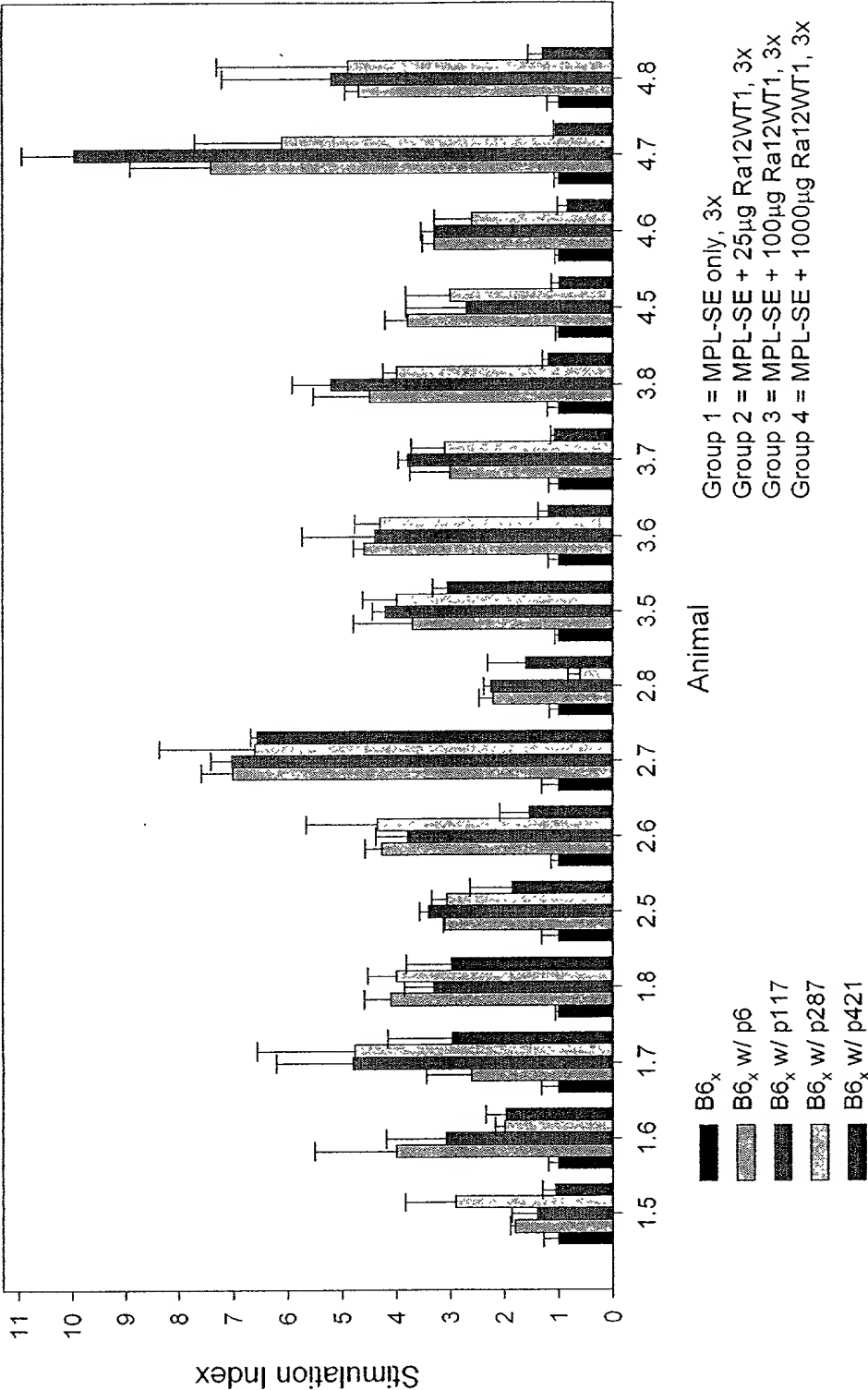


FIG. 20A

Figure 2b. Proliferative T-cell responses in WT1 protein immunized mice (Ra12WT1 dose titration, 6x in vivo, after 2IVS)

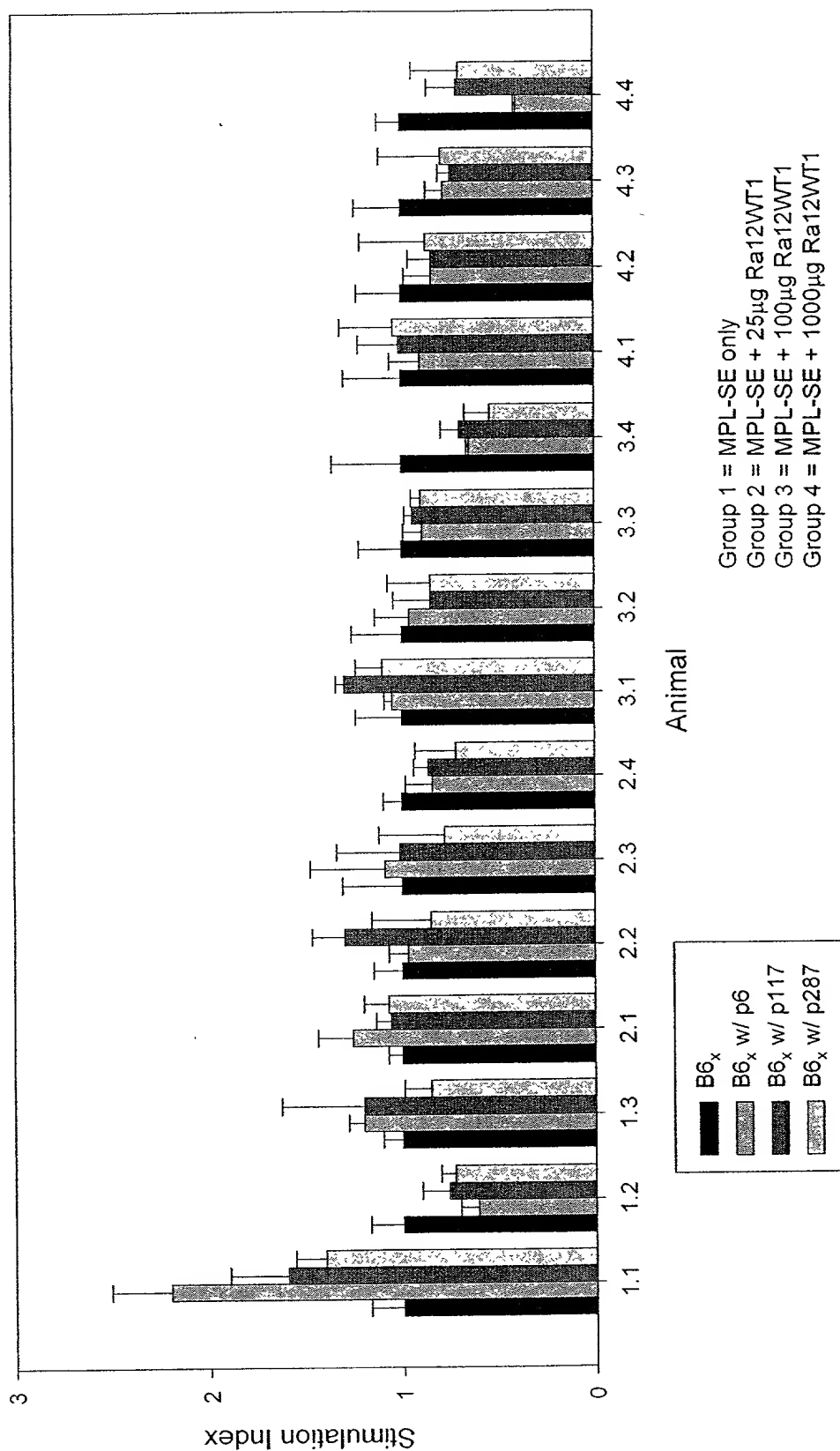
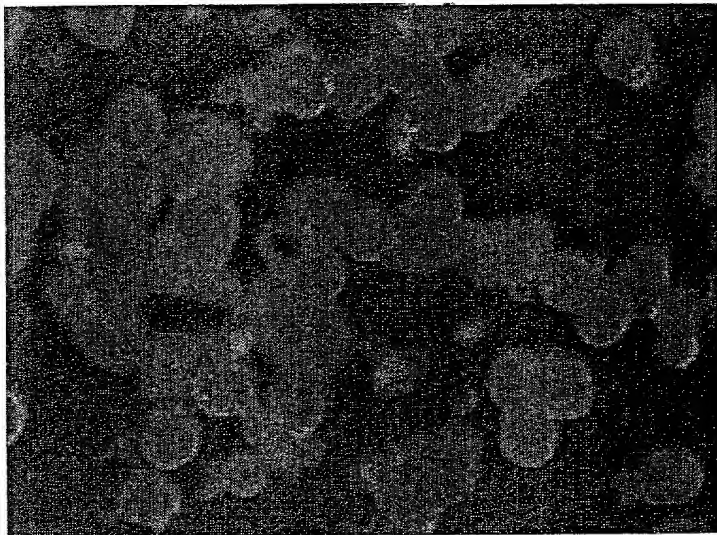


FIG. 20B

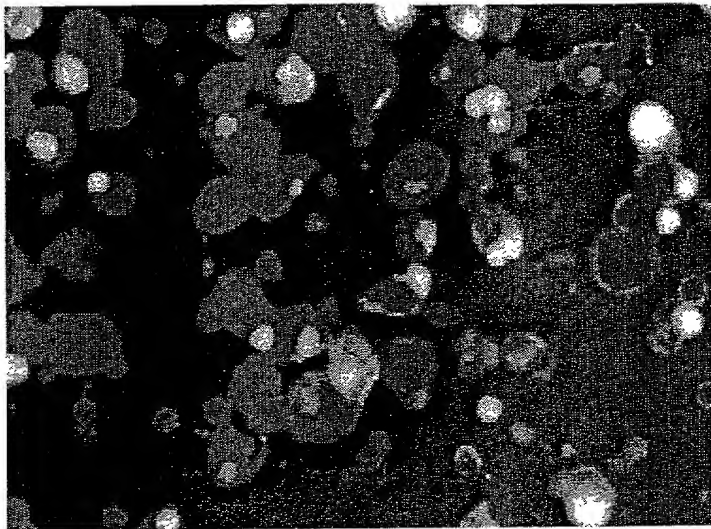
FIG. 21

# Figure 1. WT1 expression in human DC following adeno WT1 and Vaccinia WT1 infection

**Control  
(uninfected  
human DC**



**Adeno WT1  
infected human  
DC**



**Vaccinia WT1  
infected human  
DC**

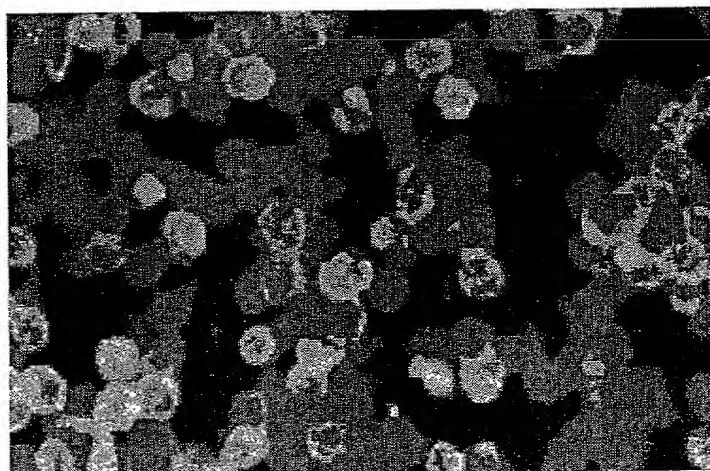
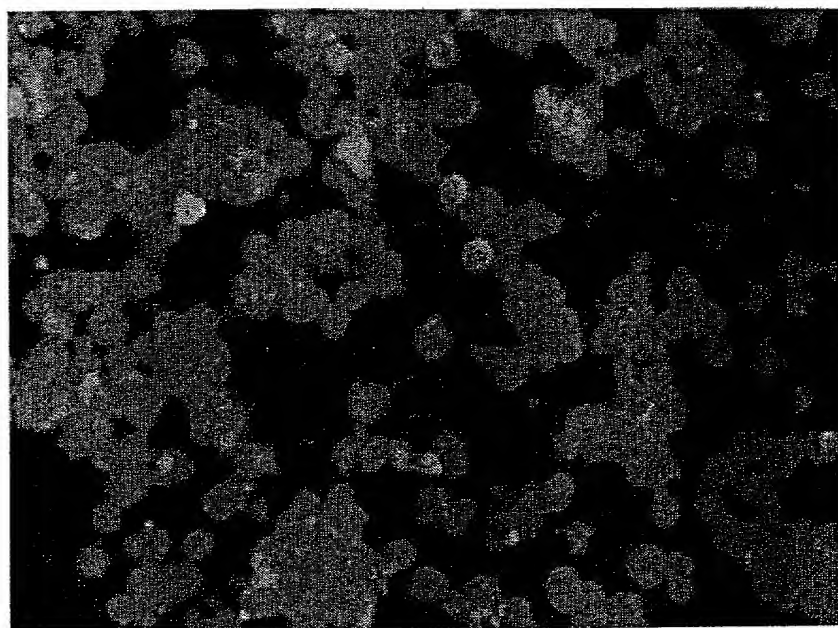


FIG. 21

FIG. 22

**Figure 2. WT1 can be expressed reproducibly in human DC following adeno WT1 infection and is not induced by a control Adeno infection**

**Control  
(Adeno EGFP  
infected  
human DC)**



**Adeno WT1  
infected human  
DC**

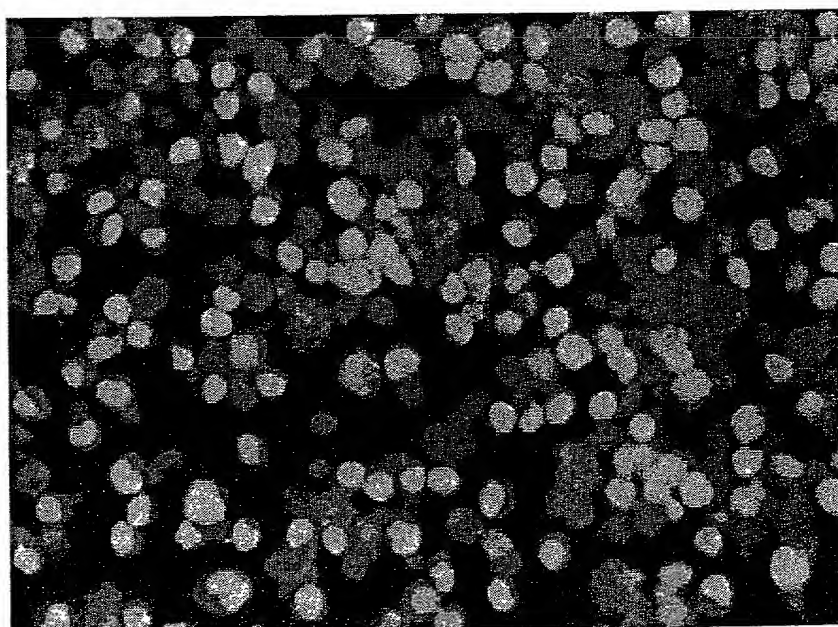


FIG. 22

FIG. 23

**Figure 3 WT1 whole gene in vitro priming elicits WT1 specific T-cell responses (IFN-gamma ELISPOT)**

